

1.0 INTRODUCTION

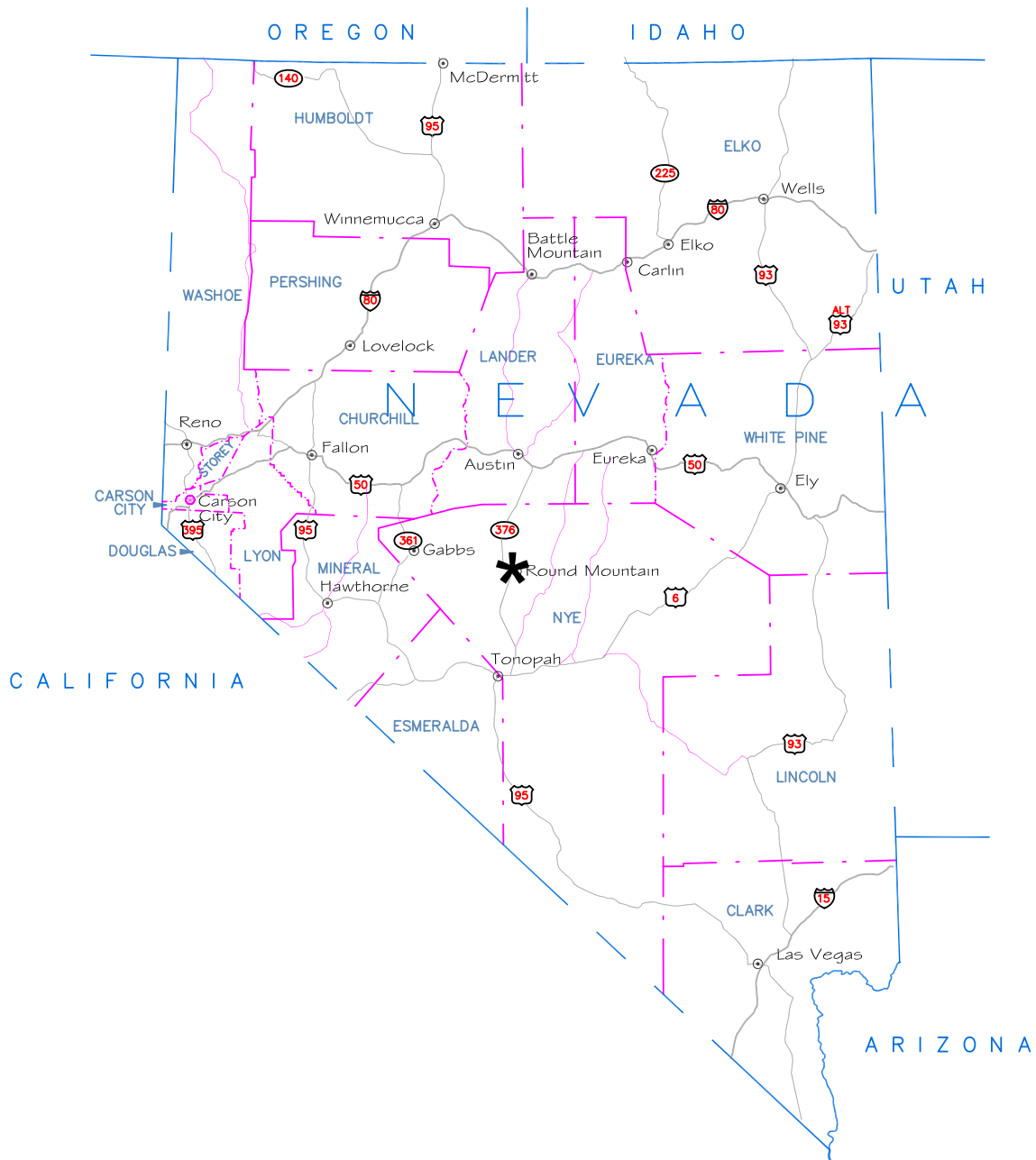
1.1 Introduction and General Location

In June 2006, Round Mountain Gold Corporation (RMGC) submitted an amendment to its current Plan of Operations (POO) (NVN-072662) for the Round Mountain Mine to the Bureau of Land Management (BLM) Tonopah Field Office of the Battle Mountain District, in compliance with Title 43 Code of Federal Regulations (CFR), subpart 3809 (43 CFR §3809), as amended, and State of Nevada regulations governing the reclamation of mined lands (Nevada Administrative Code [NAC] 519A.010-635). A revised POO Amendment for the proposed Round Mountain Expansion Project (proposed project) was submitted in May 2008, and in May 2009. The 43 CFR §3809 regulations require that the BLM fulfill its obligation under the National Environmental Policy Act of 1969 (NEPA) by analyzing and disclosing the potential environmental impacts of the proposed project. The BLM is the Federal lead agency responsible for the preparation of this Environmental Impact Statement (EIS) and the Nevada Department of Wildlife (NDOW) is a cooperating agency.

In order to evaluate and respond to RMGC's proposal for the proposed project, NEPA requires the BLM to prepare an environmental analysis document that follows the Council on Environmental Quality (CEQ) regulations at 40 CFR 1500 et seq that implement NEPA. These regulations establish procedural and content requirements for NEPA documents. In order to comply with the CEQ regulations, NEPA documents must: 1) analyze the impacts of the proposed project, 2) identify reasonable alternatives, 3) inform the public about the proposed project, 4) solicit public comment on the proposed project and alternatives, and 5) provide Federal decision-makers with adequate information upon which to base decisions.

This Draft EIS has been prepared in accordance with NEPA for use by the BLM; other Federal, State of Nevada, and Nye County agencies; and the public, in consideration of a proposed expansion of mining operations at the Round Mountain Mine. The proposed project is located east and southeast of the Town of Carvers, in the Big Smoky Valley, in northern Nye County, Nevada (**Figures 1.1-1 and 1.1-2**). Public land in the study area is administered by the BLM Tonopah Field Office, and private land is owned by the Smoky Valley Common Operation (SVCO). Mineral rights on the public and private lands within the proposed project area are owned or controlled by RMGC. The EIS presents a description of the environment and discloses impacts to the environment resulting from the proposed mine expansion. A Final EIS was completed for Round Mountain Mill and Tailings Facility in the 1996; this EIS analyzes actions at the Round Mountain Mine additional to those described and analyzed in the 1996 Round Mountain Mill and Tailings Facility EIS and other NEPA actions subsequent to 1996.

RMGC previously submitted a proposal to develop the Gold Hill Area separately from the Round Mountain Area, and a Notice of Intent (NOI) to prepare an EIS for the proposal was published in the Federal Register (FR) on April 12, 2004. Pursuant to 40 CFR 1508.25, in determining the scope of analysis, the BLM must consider the range of actions, alternatives, and impacts to be considered in an EIS. To determine the scope of an EIS, the BLM considers three types of impacts that include: 1) connected actions, which means that they are closely related and therefore, should be discussed in the same impact statement; 2) cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore, be discussed in the same impact statement; and 3) similar actions, which when viewed with other reasonably foreseeable or proposed actions, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography. The BLM carefully considered the Gold Hill Area proposal and the Round Mountain Area proposal and determined that the

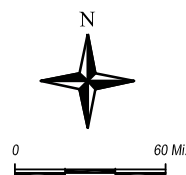


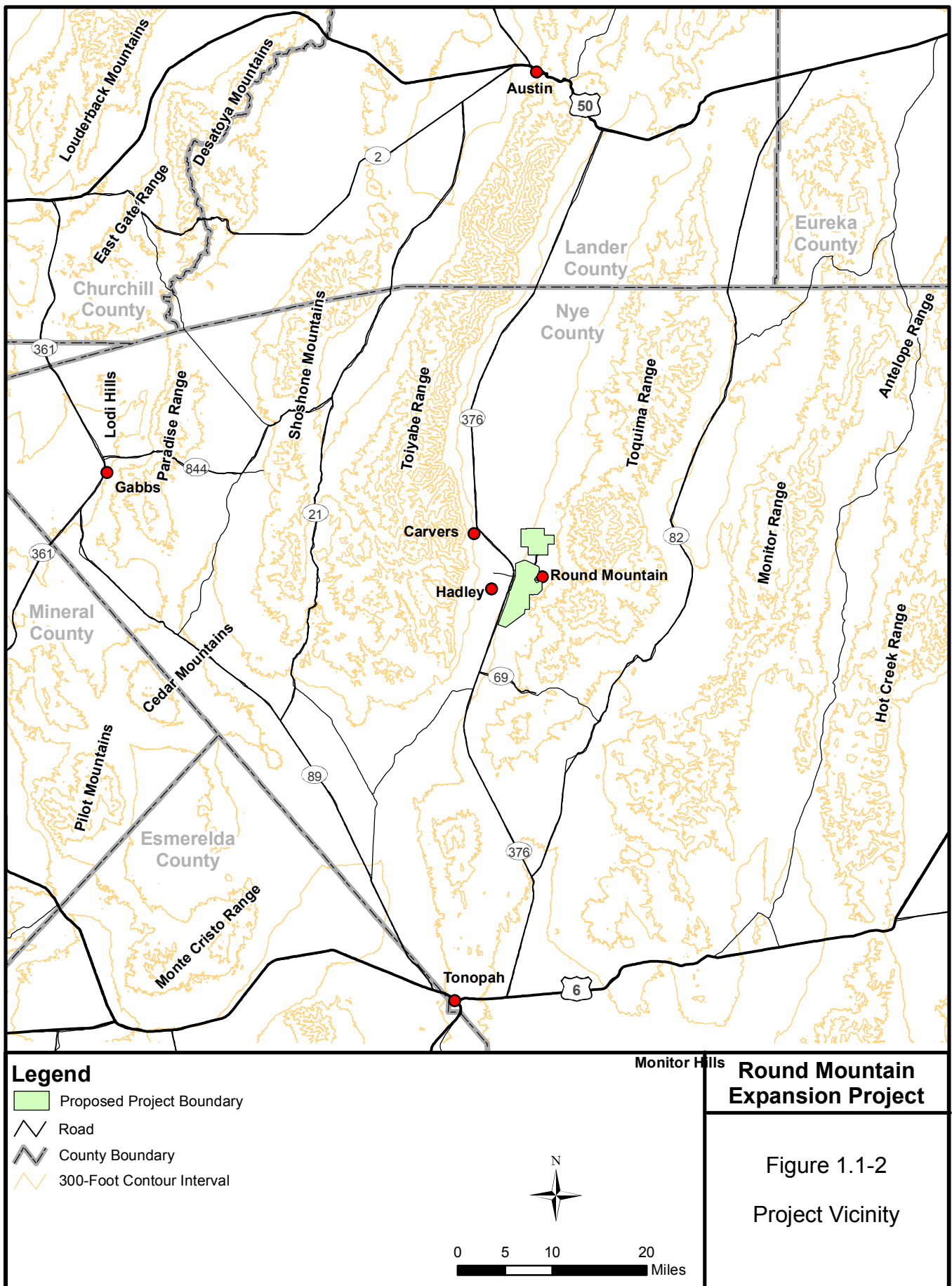
Legend

* Round Mountain Expansion Project

Round Mountain Expansion Project

Figure 1.1-1
General Location Map





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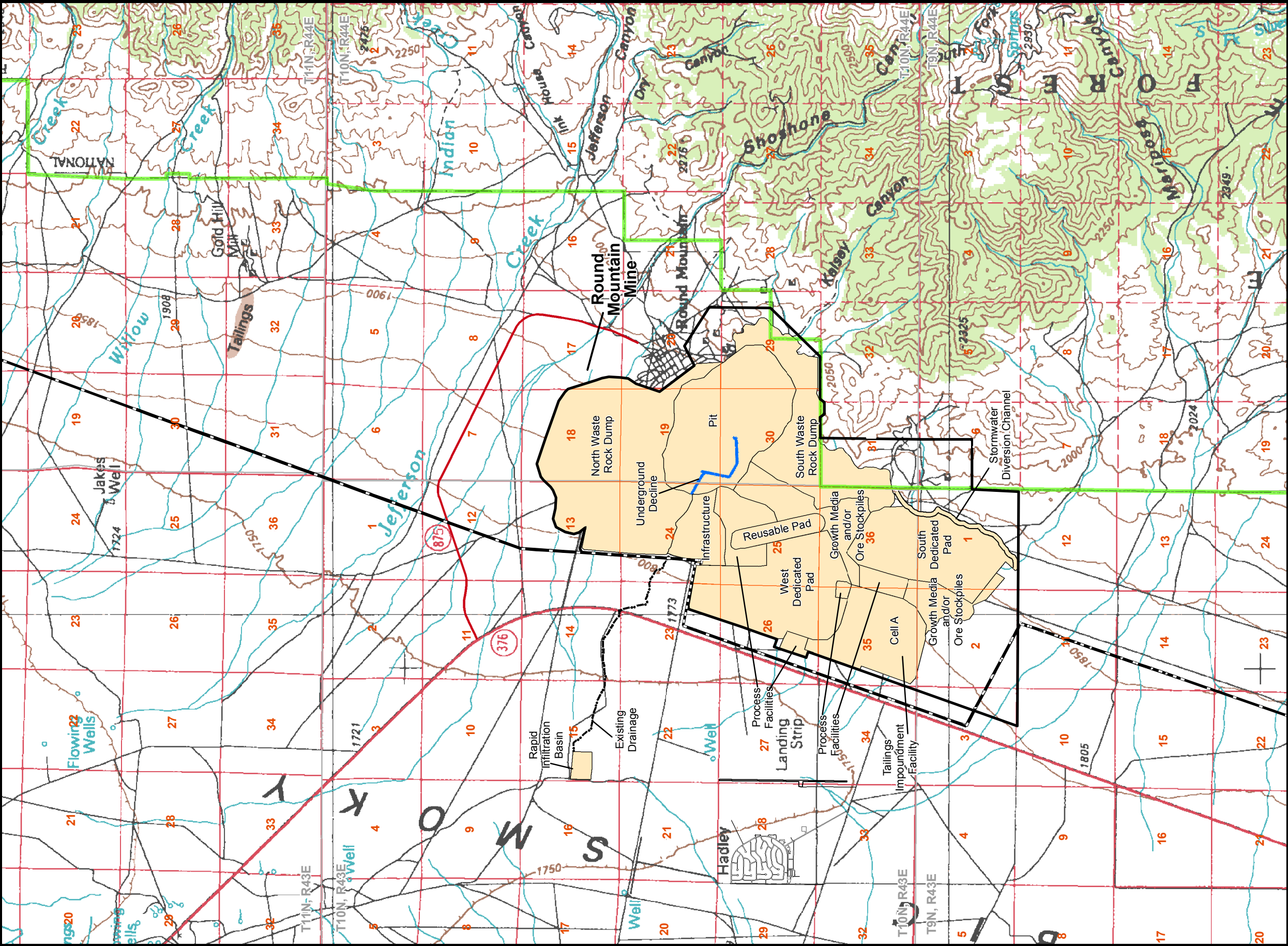
connected relationship and shared facilities between the proposed activities, the geographic proximity and temporal overlap of the two areas, and RMGC's objectives to maximize synergies between these mining operations required that these actions be analyzed in the same EIS. The BLM may include similar proposed actions as aspects of a broader proposal, analyzed in a single NEPA document, which would improve the quality of the analysis and efficiency of the NEPA process, and provide a stronger basis for decision-making. Based on these NEPA guidelines, regulations, and case law, the BLM Tonopah Field Office determined that the NEPA required the assessment of the combined impacts of connected and similar actions in a single impact statement.

1.2 Existing Facilities and Operations

Figure 1.2-1 illustrates the general existing facilities at the Round Mountain Mine. The following describes the existing and authorized facilities and operations in the Round Mountain and Gold Hill areas; not all of the authorized facilities have been constructed to their final configurations.

1.2.1 Round Mountain Area

- Open pit mine;
- Waste rock dumps, including the North and South Waste Rock Dumps;
- Heap leach facilities (Reusable, West Dedicated Pad Phases 1 through 6a, South Dedicated Pad Phases 1 through 5) including associated solution and event ponds, booster station, diversion structures, lime bins, lime slaker, carbon plant, evaporation pond, and fluid management. Both the West and South Dedicated Pads have been constructed through Phase 5. Phase 6 of the West Leach Pad has not yet been constructed;
- Primary, secondary, and tertiary crusher systems with conveyance, stackers, and stockpiles;
- Mill facility including primary crusher, coarse ore stockpile, buildings, detoxification, reagent, flotation circuit, and other storage areas;
- Tailings impoundment facility and associated reclaim ponds and pipelines. Impoundment Cell A has been constructed, and Cell B is authorized but not yet constructed;
- Gravity plant;
- Haul, secondary, and access roads;
- Electrical infrastructure including a 230-kilovolt (kV) power line, 24.9-kV power distribution system, substations, and transformers;



- Legend**
- Existing Project Boundary
 - Existing Facilities
 - NVEnergy
 - National Forest Boundary

**Round Mountain
Expansion Project**

Figure 1.2-1
Existing Facilities

Note: Topographic elevations provided in meters, USGS 1929 Vertical Datum.
Source: RMGC 2009.

- Ancillary facilities including main gate/security, administration, clinic, day care, mine office, safety, mine rescue, warehouse, contractor offices, employee parking lots, landfills, septic systems, storm ponds, core sheds, survey, laydown yards, shops, stockpiles, weir settling pond, repeater towers, assay laboratory, fuel island area, wash bay, bioremediation facilities, blasting agent storage area and powder magazines, hazardous and non-hazardous waste storage yards, diversion structures, storage areas, dispatch tower, water loadouts and storage tanks, and mine ready line and queue points;
- Surface and drill exploration, which includes the excavations or construction of drill pads, sumps, trenches, and access roads;
- Underground exploration and mine workings and supporting surface facilities; and
- Water distribution and dewatering, which includes dewatering, monitoring, and production wells, water storage ponds, associated pipelines, dewatering channels, a water distribution area, rapid infiltration basin (RIB) system, potable water system, and fire system.

A series of mine expansions and modifications have been authorized in the Round Mountain Area, resulting in the current configurations of mine components and activities.

1.2.2 Gold Hill Area

Exploration and monitoring activities, such as drilling, trenching, geotechnical investigations, geochemical characterization, and installation of monitoring wells, have been conducted in the Gold Hill Area.

1.3 Summary of Proposed Action

The Round Mountain Mine has been in continuous operation since 1976. The proposed project would further extend operations at the mine through 2024. The proposed project would include the expansion of facilities in the Round Mountain Area and construction of new facilities in the Gold Hill Area, located to the north of the existing Round Mountain Mine. The two operating areas would be connected by a Transportation/Utility Corridor. The proposed project would include:

1.3.1 Round Mountain Area

- Increasing the existing Round Mountain Project Boundary Area from 7,263 to 10,385 acres, an incremental increase of 3,122 acres;
- Expanding the permitted Round Mountain Pit by about 209 acres to a total of approximately 1,289 acres and deepening the Round Mountain Pit by about 455 feet to approximately 4,610 feet in elevation;
- Expanding the dewatering operations for the open pit;
- Conducting underground mining operations;
- Expanding the North Waste Rock Dump by about 700 acres to a total of approximately 1,919 acres;

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- Adding a North Dedicated Leach Facility with a footprint of about 538 acres, as well as process ponds and carbon adsorption plant;
- Expanding the Reusable Pad by about 8 acres to a total of approximately 51 acres;
- Expanding the West Dedicated Pad by about 38 acres and adding associated process ponds;
- Expanding the milling and flotation circuits to increase the processing rate from 11,000 tons per day (tpd) to approximately 22,000 tpd;
- Increasing tailings disposal capacity by adding cells with a combined footprint of approximately 886 acres and associated reclaim ponds;
- Expanding the process facility areas by about 62 acres;
- Moving the primary and secondary crushing facilities;
- Expanding growth media and ore stockpile areas;
- Adding lime silos and/or lime slakers;
- Expanding the stormwater controls and diversions; and
- Conducting exploration for additional gold ore.

1.3.2 Gold Hill Area

- Delineating a Project Boundary Area of approximately 4,928 acres;
- Constructing a 1.1-mile-long, 500-foot-wide (66.2 acres) Transportation/Utility Corridor connecting the Round Mountain and Gold Hill areas;
- Excavating an open pit approximately 222 acres in size, which would include a 200-foot-wide buffer zone for potential variations resulting from design modifications, such as engineering adjustments to the open pit perimeter and haul/access road realignments;
- Constructing 2 waste rock dumps for a total of approximately 552 acres;
- Constructing and operating a heap leach facility with an approximate footprint of 300 acres, as well as **a portable jaw crusher within the leach pad footprint**, associated lined solution ponds, collection and conveyance pipes, lined ditches, pumps, reagent storage, and associated controls;
- Constructing and operating a Merrill-Crowe precious metals precipitation plant, retort, and refinery;
- Developing internal haul roads and secondary roads;
- Installing dewatering wells and associated piping systems;

- Installing production water wells;
- Constructing basins for the infiltration of water from dewatering of the Gold Hill Pit;
- Constructing ancillary facilities including but not limited to: intramine area, stormwater controls and diversion ditches; lime silos and a lime slaker; lined water storage pond; fuel storage; landfill; septic systems; and other support facilities; and
- Conducting exploration for additional gold ore.

1.4 Purpose of and Need for the Action

The purpose of the proposed project is to continue to profitably recover gold and silver reserves and resources on Federal mining claims from ore bodies in the proposed project area utilizing, to the extent practical, existing facilities at RMGC's currently permitted operations.

The proposed project need is to meet the prevailing market demand for gold and silver. The prevailing market demand is adjusted on a daily basis on commodity exchanges throughout the world. This adjustment results from buyers and sellers agreeing on a specific transaction price, which reflects the current supply and demand for the commodity and other factors.

1.5 BLM's Responsibilities and Relationship to Land Use Plan

1.5.1 BLM Resource Management Plan

The BLM has the responsibility and authority to manage the surface and subsurface resources on public lands located within the jurisdiction of the BLM Tonopah Field Office, and it has designated lands within the proposed project area as open for mineral exploration and development. In its Record of Decision (ROD) for the Tonopah Resource Management Plan (RMP) (BLM 1997), the BLM objective for locatable minerals is:

- "To provide opportunity for exploration and development of locatable minerals, such as gold, silver, copper, lead, molybdenum, etc., consistent with the preservation of fragile and unique resources in areas identified as open to the operations of the mining laws."

Standard Operating Procedures for the development of locatable minerals include:

- The "BLM provides for mineral entry, exploration, location and operations pursuant to the mining laws in a manner that 1) will not unduly hinder the mining activities, and 2) assures that these activities are conducted in a manner which will prevent undue or unnecessary degradation of the public land."
- "A Plan of Operations and a Reclamation Plan are required in situations in which there will be more than 5 acres of cumulative unreclaimed surface disturbance in a project area."

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- “All operations shall comply with all Federal and State laws, including those relating to air quality, water quality, solid waste, fisheries, wildlife and plant habitat, and archeological and paleontological resources.”

The proposed project is consistent with the objectives and goals of the Tonopah RMP/ROD as approved on October 2, 1997.

1.5.2 Surface Management Authorizations and Plans

The BLM is responsible for administering mineral rights access on certain Federal lands as authorized by the General Mining Law of 1872, as amended. Under the law, qualified applicants are entitled to reasonable access to mineral deposits on public domain lands that have not been withdrawn from mineral entry. BLM authority derives from the Federal Land Policy and Management Act of 1976 (FLPMA). BLM regulations for the Surface Management (of mining) in Title 43 CFR, §3809 were promulgated in 1981 and revised in 2001, and derive their mandate from Sections 302 and 303 of FLPMA. RMGC submitted their amendment to the POO for the proposed project as required by BLM 43 CFR §3809 regulations. In order to use public land administered by the Tonopah Field Office, RMGC must comply with the BLM Surface Management Regulations (as amended) (43 CFR §3809) and other applicable statutes, including the Mining and Mineral Policy Act of 1970 (as amended) and FLPMA. The BLM has the responsibility and authority to manage the surface and subsurface resources on public lands located within the jurisdiction of the Tonopah Field Office.

The BLM must review RMGC's plans for developing the proposed project to ensure that:

- Adequate provisions are included to prevent unnecessary or undue degradation of Federal lands;
- Measures are included to provide for reclamation of disturbed areas; and
- Proposed project activities comply with all applicable state and Federal laws.

The BLM has reviewed RMGC's POO Amendment and has prepared this EIS to ensure compliance with these surface management requirements and NEPA.

1.5.3 National Environmental Policy Act

Pursuant to 43 CFR §3809.411, the environmental effects of plans of operations must be analyzed and disclosed to the public in compliance with NEPA. The analysis of the environmental effects of a proposed action and alternatives are described in a comprehensive analytical document, such as this EIS.

The EIS would be used by the BLM to make an informed decision on the proposed mine expansion. The FLPMA and the related BLM surface management regulations (43 CFR §3809) require that all mineral exploration or mining operations on BLM-administered public land be conducted in a manner that prevents undue or unnecessary degradation of the public lands. This is achieved through the application of substantive environmental standards from Federal and state laws and regulations and incorporation of appropriate mitigation measures to mitigate the environmental effects of an action, such as the proposed mine expansion.

1.5.4 BLM Cyanide Management Plan

The BLM's national cyanide management policy requires that BLM state offices prepare a Cyanide Management Plan. The Nevada State Office of the BLM has prepared and administers the Nevada Cyanide Management Plan (BLM 1991). The Nevada Cyanide Management Plan is applicable to all public lands administered by the BLM in Nevada and would be applicable to the proposed project's cyanide heap leaching activities, relevant precious metal recovery processes, and expanded tailings impoundment facility. The Nevada Cyanide Management Plan provides guidance on cyanide use in mining activities and lists the following objectives:

- Implement the BLM's national cyanide management policy;
- Ensure that mining operations using cyanide on BLM-administered lands follow Best Management Practices (BMPs) and do not cause unnecessary or undue degradation of the Federal lands;
- Provide both the mine operator and the BLM technical staff with standards for development and evaluation of mining projects that use cyanide; and
- Use state standards, if established.

The Nevada Cyanide Management Plan is not intended to duplicate requirements of other Federal or state agencies with responsibility for managing the use of cyanide in mining operations. Where standards are established for mining operations by the State of Nevada through the Nevada Division of Environmental Protection (NDEP), Bureau of Mining Regulation and Reclamation (BMRR), they shall apply when reviewing a Notice or a Plan. The BLM has reviewed the POO Amendment for the proposed project to ensure that it is in conformance with the Nevada Cyanide Management Plan.

1.5.5 BLM Reclamation Standards

The Mining and Mineral Policy Act of 1970 (MMPA) mandates that Federal agencies ensure that closure and reclamation of mine operations be completed in an environmentally responsible manner. The MMPA states that the Federal government should promote the "development of methods for the disposal, control, and reclamation of mineral waste products, and the reclamation of mined lands, so as to lessen any adverse impact of mineral extraction and processing upon the physical environment that may result from mining mineral activities."

Relevant BLM policy and standards for reclamation are presented in the BLM Solid Minerals Reclamation Handbook (BLM Manual Handbook H-3042-1), which provides consistent reclamation guidelines for all solid non-coal mineral activities conducted under the authority of the BLM Minerals Regulations in Title 43 CFR (BLM 2001). BLM's short-term reclamation standards and goals include stabilization of disturbed areas and protection of both disturbed and adjacent undisturbed areas from unnecessary or undue degradation. The BLM's long-term reclamation standards and goals include the establishment of a self-sustaining, safe, and stable condition providing productive post-mining use of the land, which conforms to the approved land use plan for the area. The BLM has reviewed the Reclamation Plan for the proposed project to ensure that the proposed project would meet BLM's reclamation standards and goals.

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1.5.6 Relationship to Non-BLM Policies, Plans, and Programs

Nye County, in cooperation with the Nevada Division of State Lands, has adopted a Policy for Public Lands within its jurisdiction (Nye County 1985). This plan was developed in response to Nevada State Bill 40, which directs the State Land Use Planning Agency to work with local planning entities to prepare local plans and policy statements regarding the use of Federal lands in Nevada. The proposed project is consistent with the policies in this plan, which includes promoting expansion of mining operations/areas.

1.6 History of the Plans of Operation at the Round Mountain Mine

Numerous POO amendments and environmental analyses have been completed for the existing Round Mountain Mine since 1976. Through a series of mine expansions and modifications, the mine has evolved to its current size and configuration. Major facilities at the existing Round Mountain Mine include a mine pit, waste rock dumps, reusable leach pads, dedicated leach pads, roads, process plants, administrative and support buildings, and other ancillary facilities. A chronological summary of these POO amendments is provided in Section 2.2, Background.

1.7 Environmental Review Process

Numerous opportunities for public input occur during the NEPA decision-making process. The initial step in the EIS process is to notify the public and other government agencies of the BLM's intent to prepare an EIS. The BLM published a NOI to prepare an EIS for the proposed project in the FR on December 26, 2006. The NOI included a summary of the proposed project, information on public scoping, and project contact information.

The purpose of public scoping is to actively solicit and acquire input from the public and other interested Federal, state, tribal, and local agencies about the proposed project. Information received during public scoping helps the agencies identify potential environmental issues/impacts, alternatives, and mitigation measures associated with the development of the proposed project. The process provides a mechanism for focusing and clarifying the issues so the EIS can address and analyze the primary areas of concern. Section 5.1, Public Participation and Scoping, provides detailed information regarding public scoping that was conducted for the proposed project.

After completion of the public scoping period, a Draft EIS is prepared that addresses all of the environmental effects associated with the Proposed Action including the issues and concerns identified during the scoping period. After the Draft EIS is published through the Notice of Availability (NOA) in the FR, the public has the opportunity to comment on the EIS during a 45-day comment period. During the public comment period, the BLM conducts public meetings which are held at the same locations as the public scoping meetings. Comments can be submitted at the public meetings by filling out the comment forms or providing verbal comments to BLM staff. The public may also submit comments to the BLM Tonopah Field Office via mail, facsimile, and e-mail. The Final EIS includes responses to all substantive public comments received on the Draft EIS.

1.8 Project Permits and Approvals

In addition to the EIS, implementing the Proposed Action would require authorizing actions from other Federal, state, and local agencies with jurisdiction over certain aspects of the proposed project. **Table 1.8-1**

lists the required permits or approvals that are already in place or would be obtained and the responsible regulatory agencies. RMGC is responsible for amending existing permits, and applying for and acquiring additional permits, as needed.

Table 1.8-1
Major Permits and Approvals

Permit/Approval	Granting Agency
EIS POO Approval Right-of-way (ROW) Permits	U.S. Department of the Interior, BLM
Explosives Permit	U.S. Department of the Treasury, Bureau of Alcohol, Tobacco, and Firearms (ATF)
Compliance with Clean Water Act of 1972 (CWA) Section 404	U.S. Army Corps of Engineers (USACE)
State of Nevada CWA Section 401 Certification	Nevada Department of Conservation and Natural Resources, NDEP, Bureau of Water Pollution Control
Surface Disturbance Permit Permit to Construct Permit to Operate Mercury Operating Permit to Construct	Nevada Department of Conservation and Natural Resources, NDEP, Bureau of Air Pollution Control
Water Pollution Control Permit Reclamation Permit Discharge Permit	Nevada Department of Conservation and Natural Resources, NDEP, BMRR
Permit to Appropriate Water Permit to Construct Tailings Dam and Ponds	Nevada Department of Conservation and Natural Resources, NDEP, Division of Water Resources
Industrial Artificial Pond Permit	NDOW
Approval to Operate a Sanitary Landfill	Nevada Department of Conservation and Natural Resources, NDEP, Bureau of Waste Management
General Permit to Operate and Discharge (large-capacity septic systems)	Nevada Department of Conservation and Natural Resources, NDEP, Bureau of Water Pollution Control
Permit to Operate	Nevada State Minerals Commission, Division of Minerals
Public Drinking Water System Permit	Nevada Department of Conservation and Natural Resources, NDEP, Bureau of Safe Drinking Water
Radioactive Material License	Nevada State Health Division, Bureau of Health Protection Services
Hazardous Materials Permit	State of Nevada, Fire Marshal Division
Hazardous Waste Generation ID	Nevada Department of Conservation and Natural Resources, NDEP, Bureau of Waste Management; U.S. Environmental Protection Agency (USEPA)
Road Rerouting Applications	Nye County

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1.9 Organization of the Environmental Impact Statement

As described in detail in the previous sections, Chapter 1.0 of the EIS provides an introduction and general location of the existing facilities and Proposed Action. In addition, this chapter describes: the purpose of and need for the proposed project; responsibilities of the BLM; conformance of the proposed project to existing BLM and non-BLM policies, plans, and programs; previous environmental analyses at the existing Round Mountain Mine; environmental review process; and permits and approvals that would be needed for the proposed project.

Chapter 2.0 provides detailed information regarding existing facilities and operations at the Round Mountain Mine, the proposed mine expansion (Proposed Action), other action alternatives, the No Action Alternative, proposed reclamation, RMGC's environmental protection measures, alternatives considered but eliminated from detailed analyses, interrelated projects, and comparison of impacts between the Proposed Action, action alternatives, and No Action Alternative. Numerous figures also are provided in this chapter, which illustrate mine components and other features that would be part of the Proposed Action or action alternatives.

Chapter 3.0 describes the existing natural and human environment within proposed disturbance areas associated with the study area.

Chapter 4.0 describes the potential direct and indirect impacts to natural and human environment resources with the implementation of the Proposed Action and alternatives; cumulative impacts to these resources with the implementation of the Proposed Action and alternatives in combination with impacts contributed by other past, present, and reasonably foreseeable future actions; potential monitoring and mitigation measures developed to avoid or minimize resource impacts; and residual **impacts** to these resources after the implementation of potential monitoring and mitigation measures. This chapter also discusses the relationship between short-term uses of the human environment and the maintenance and enhancement of long-term productivity, and irreversible and irretrievable commitment of resources.

Chapter 5.0 provides a summary of the public participation and scoping process used to solicit comments on the Proposed Action and alternatives and identify issues or concerns; consultation and coordination undertaken to prepare the EIS; a list of Federal, state, and local agencies, tribal organizations, and private organizations and companies that were contacted during the preparation of the EIS; agencies, organizations, and persons to whom copies of the EIS were sent.

Chapter 6.0 provides a list of lead and cooperating agency personnel and AECOM's team members that developed the EIS. Chapter 7.0 lists the references that were used in the EIS to document the source or sources of information. Chapter 8.0 includes a glossary of terms the readers can use to obtain definitions for scientific or technical terms. Appendices included in the EIS provide supplemental detailed information used to support statements or findings documented in the EIS.